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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,712	01/19/2001	Randy K. Young	201009/131	2864

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Gunnar G. Leinberg
NIXON PEABODY LLP
Clinton Square
P.O. Box 31051
Rochester, NY 14603

EXAMINER	
AGHDAM, FRESHTEH N	

ART UNIT	PAPER NUMBER
2611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

711

Office Action Summary	Application No.	Applicant(s)	
	09/765,712	YOUNG, RANDY K.	
	Examiner	Art Unit	
	Freshteh N. Aghdam	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21,56-60,62 and 65-128* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21,56-60,62 and 65-128* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 11, 2007 has been entered.

Drawings

The drawings are objected to because figure 5 is missing label "FIG. 5". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 4, 6-7, 10, 13, 56-60, 62, 65-68, 70, 73-75, 85, 88-91, 93 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 4, 13, 87, 93, the subject matter claimed in claim 4 in inconsistent with the subject matter claimed in claim 2, in which the two matched base signals (one of which is time scaled and time delayed) are combined to form a doublet and the doublet is transmitted. But according to claim 4, the two matched base signals are not combined and each matched base signal is transmitted via a separate antenna.

Claims 56-60, 62, and 65-68 claim time scaling is applied to the doublet; but on the contrary, according to the disclosure of the invention, the time scaling is applied to one of the pair of substantially matched base signals (Fig. 2 and 5).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 92 recites the limitation "the imaging information" in lines 7-8. There is insufficient antecedent basis for this limitation in the claim.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 56-60, 62, and 65-68 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 56-60, 62, and 65-68 claim time scaling is applied to the doublet; but on the contrary, according to the disclosure of the invention, the time scaling is applied to one of the pair of substantially matched base signals (Fig. 2 and 5).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> ((e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-6, 8-9, 15-16, 19, 65, 68-73, 77, 79-80, 84, 92, 95, 99-100, 103-109, 111, and 113, 115, 117-124, 126, and 128 are rejected under 35 U.S.C. 102(e) as being anticipated by Kroeger et al (US 6,178,317).

As to claim 1, 3, 5, 8-9, 69, 71-72, 84, 86, 98, 110, and 112, Kroeger discloses a communication system comprising: a transmission system (Fig. 1); and a receiving system (Fig. 1).

According to MPEP 2114 an apparatus is what a device is rather than what a device does "a claim directed to an apparatus must be distinguished from the prior art in terms of structure rather than function... a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior art apparatus teaches all the structural limitations of the claim." Therefore, independent claims 1, 69, 84 should be amended to incorporate sufficient structural details in order to be distinguished from the prior art in terms of structure rather than function.

As to claims 2, 6, 70, 73, 85, Kroeger discloses a communication system, wherein the transmission system comprises: a signal generator which generates a pair of substantially matched base signals (Fig. 1, means 110); an encoding system which modulates one of a plurality of time scales (means 164 and 166) and one of a plurality of time delays (means 116) onto the one of the pair of substantially matched base signals; a combiner which combines the time scaled and time delayed base signal with

the other one of the pair of base signals to form a doublet (means 168); and a transmitter which transmits the doublet (output of means 172).

As to claims 12, 15-16, 18-19, 65, 68, 77, 80, 92, 95, Kroeger discloses a communication method comprising: applying one of a plurality of time scales and one of a plurality of time delays to one of a pair of substantially matched base signals, wherein the applied one of the plurality of time scales is less than one (Fig. 1, means 164 and 166; since the frequency is greater than one and time is in reverse relation with frequency; therefore, the time scale is less than one); combining the time scaled and time delayed base signal with the other one of the pair of base signals to form a doublet (means 168); transmitting the doublet to the environment (through means 172); receiving the doublet (including imaging data in the environment through means 142); and extracting information (audio signal) from the doublet based on the one of the plurality of time scales and on the one of the plurality of time delays which were applied (means 135 and 140).

As to claim 79, Kroeger further discloses imbedding additional information in one of the pair of substantially matched base signals in the doublet (Col. 5, lines 25-30; Fig. 1, means 181).

As to claims 99-100, 103-109, 111, and 113, Kroeger discloses that the time scaling is applied without spread spectrum modulation (Fig. 1).

As to claims 115, 117-124, 126, and 128, Kroeger discloses that the signals to be combined to form the doublet are substantially matched infrequency (because they are identical; Abstract).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 17, 60, 67, 74, 76, 81, 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kroeger et al, and further in view of the instant application's disclosed prior art.

As to claims 7, 17, 74, 81, 96, Kroeger discloses a transmission system that includes a conditioning part (means 170). Kroeger does not expressly disclose that the conditioning part performs temporal and spectral equalization in order to distribute the pair of matched base signals evenly across the duration and the spectrum of the pair of matched base signals. However, one of ordinary skill in the art would recognize that signal conditioning prior to signal transmission, wherein the signal to be transmitted is temporally and spectrally equalized is well known in the art in order to prepare the signal for transmission as it is evidenced by the instant application's disclosed prior art (Pg. 12, lines 16-20). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Kroeger with the instant application's disclosed prior art for the reason stated above.

As to claims 60, 67, 76, Kroeger discloses receiving the doublet signal (Fig. 1); and extracting the information from the doublet based on one of a plurality of time

scales which was applied to one of a pair of substantially matched base signal, wherein the applied one of plurality of time scales is less than one (T=1/f), wherein the receiver further comprises a conditioning part (means 144). Kroeger does not expressly disclose that the conditioning part performs temporal and spectral equalization in order to distribute the pair of matched base signals evenly across the duration and the spectrum of the pair of matched base signals. However, one of ordinary skill in the art would recognize that signal conditioning prior to signal transmission, wherein the signal to be transmitted is temporally and spectrally equalized is well known in the art in order to prepare the signal for transmission as it is evidenced by the instant application's disclosed prior art (Pg. 12, lines 16-20; Pg. 16, lines 3-6). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Kroeger with the instant application's disclosed prior art for the reason stated above.

Claims 14, 57, 62, 78, 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kroeger et al, and further in view of Weiss (US 2004/0260415).

As to claims 14, 57, 62, 78, 94, Kroesger discloses forming the doublet; transmitting the doublet signal; receiving the doublet signal; and extracting the information from the doublet signal based on one of the plurality of time scales and one of the plurality of time delays which were applied. Kroeger does not expressly disclose providing a plurality of doublets and combining all of the doublets to form a composite signal; transmitting the composite signal; and receiving the composite signal and extracting the information from the doublets that form the composite signal. Weiss discloses segmenting the audio signal and transmitting each segment of the audio

signal by employing signal redundancy (Abstract). One of ordinary skill in the art would recognize that employing redundancy by transmitting the same signal twice could be implemented by forming doublets, combining the doublets, and transmitting the composite signal via an antenna (e.g. reduced hardware complexity version). Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Kroeger using teaching of Weiss in order to increase data integrity and reduce hardware complexity together.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dieterich (US 4, 382,299) see figure 2.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freshteh N. Aghdam whose telephone number is 571-272-6037. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Freshteh N. Aghdam
Examiner
Art Unit 2611

January 29, 2008

CHIEH M. FAN
SUPERVISORY PATENT EXAMINER